

## IN THE CLAIMS:

1. (Amended) A method of determining the initial dose of a vitamin D compound[,] for the treatment of secondary hyperparathyroidism and renal osteodystrophy without increasing the incidence of hypercalcemia comprising:
  - a. measuring a patient baseline PTH (bPTH) value,
  - b. determining [the] a final dose of the vitamin D compound, where the final dose is that dose associated with a first stable clinically significant reduction in patient intact parathyroid hormone (PTH) for the vitamin D compound,
  - c. applying the baseline PTH value and final dose to regression analysis, and
  - d. calculating the initial dose of the vitamin D compound from the regression analysis of step c.
2. (Original) The method of claim 1 wherein the [linear model] regression analysis is a zero intercept linear model.
3. (Original) The method of claim 1 wherein the vitamin D compound is a vitamin D<sub>2</sub> compound.
4. (Original) The method of claim 3 wherein the vitamin D<sub>2</sub> compound is paricalcitol.
5. (AMENDED) The method of claim 4 wherein the initial dose is patient baseline PTH/80 (bPTH/80).
6. (Amended) [The] A method of treating secondary hyperparathyroidism and renal dystrophy using a vitamin D compound without increasing the incidence of hypercalcemia [claim 1 further] comprising
  - a) measuring a patient baseline PTH value;
  - b) determining a final dose of the vitamin D compound associated with a first stable clinically significant reduction in patient PTH for the vitamin D compound;
  - c) applying the baseline PTH and final dose to regression analysis;
  - d) calculating the initial dose of the vitamin D compound from the regression analysis of step c; and
  - e) [administration of] administering the initial dose determined in step d to the patient.
7. (Amended) A method of treating elevated intact parathyroid hormone (PTH) in a patient commencing treatment for [ESRD] end stage renal disease, the method comprising:

- a. determining the initial dose of a vitamin D compound from a regression analysis based on a patient baseline PTH (bPTH) and a final dose of the vitamin D compound associated with a first stable and clinically significant reduction in patient PTH for the vitamin D compound, and
  - b. administering the initial dose of the vitamin D compound determined in step a to the patient.
8. (Original) The method of claim 7 wherein the vitamin D compound is paricalcitol.
9. (Original) The method of claim 8 wherein the initial dose is about patient baseline parathyroid hormone/80 (bPTH/80).
10. (Amended) A method of treating a patient [undergoing vitamin D therapy] for end stage renal disease [ESRD] using a vitamin D therapy, [wherein the] comprising administering an initial dose of vitamin D [administered] to the patient wherein the initial dose of vitamin D is about patient baseline parathyroid hormone/80 (bPTH/80) and bPTH is the baseline PTH for the patient.
11. (Amended) A method of treating a patient [undergoing vitamin D therapy] for secondary hyperparathyroidism using a vitamin D therapy, [wherein the] comprising administering an initial dose of vitamin D [administered] to the patient wherein the initial dose of vitamin D is about patient baseline parathyroid hormone/80 (bPTH/80) and bPTH is the baseline PTH for the patient.
12. (Amended) A method of determining the initial dose of a vitamin D compound using a zero-intercept linear regression model [to determine the initial dose of a vitamin D compound].
13. (AMENDED) A method of treating a patient undergoing vitamin D therapy for [ESRD] end stage renal disease wherein a zero-intercept regression model is used to determine the initial dose of the vitamin D compound.
14. (Amended) The method of claim 13, wherein the vitamin D therapy [the vitamin D compound] results in the prevention or treatment of renal osteodystrophy or secondary hyperparathyroidism.
15. (Original) A method of claim 8 wherein the initial dose is at least 1 mcg.
16. (New) The method of claim 13, wherein the vitamin D therapy does not increase the incidence of hypercalcemia.